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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>18 May 2005</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>22-42</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>22-42</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some *   c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>5/18/2005</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

2.   Claims 27 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claim 27 recites the limitation "the result" on page 3, line 19. There is insufficient

antecedent basis for this limitation in the claim.

Claim 33 recites the limitation "the communication partner" on page 5, line 16.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 22-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over

US 6400996 (hereinafter Hoffberg et al.), and further in view of JP2002-007020

(hereinafter Michihiro).

Regarding claim 22,

Hoffberg et al. substantially teach a device (column 41, lines 60-61, "air conditioning control, lighting, appliances, machinery") which has a function of transmitting operation data that describes user's operation details (column 42, lines 3-7, "inputs from various devices and sensors, ..., may be received and processed locally or remotely); Hoffberg et al. further teach that user inputs are save into user history and used to predict a desired user function by a controller and services are provided to the user based on the prediction (column 41, lines 3-67, "may all be controlled locally or remotely through interfaces of the local system" and column 42, lines 9-10, "remote monitoring and control"; abstract: "predicting a desired user function based on user history", "The apparatus receives an input from the user and other data", "wherein a user input is matched to a video stream on a conceptual basis, allowing inexact programming of a multimedia device", "the system analyzes a data stream for correspondence with a data pattern for processing and storage").

Hoffberg et al. does not explicitly disclose the detail utilization of the accumulated operation history.

Michihiro teaches a system/apparatus/device that

accumulates the operation data transmitted from the device as operation history data in chronological order (page 4, lines 20-22, "an operation history database operable to accumulate the operation history recorded by said operation monitoring module", page 5, lines 11-12, "detects one or more sequences of operations which appear with frequency exceeding a standard frequency"),

specifies a frequent operation pattern which is a sequence of frequent

operation histories based on the accumulated operation history data (page 4,

lines 22-25, "an operation pattern analysis module operable to analyze a series

of operations (hereinafter referred to as an operation pattern) which frequently

appear based on said operation history database) and

provides service according to the user's behavior predicted from the

specified frequent operation pattern included in the accumulated operation

history data (page 4, lines 9-11, "extracts a fixed processing from details of the

performed operation, and enable the user to easily use the fixed operation", lines

27-28, "an operation pattern utilization module operable to provide an interface

by which the user can easily use the operation pattern").

Although Hoffberg et al. doesn't explicitly disclose that the device transmits

operation history data to the controller and that the controller process the received

operation history data as claimed, receiving and processing of operation history data by

the controller are suggested in Hoffberg et al. It would have been obvious to one of

ordinary skill in the art, having the teachings of Hoffberg et al. and Michihiro before them

at the time the invention was made to include the detailed method of processing

operation history of Michihiro as part of the processing/controlling system that provide

service to a device based on accumulated user operation history of Hoffberg et al.

One of ordinary skill in the art would have been motivated to make this

modification in order to enable a controller to provide services to a user based on

monitoring user operation onto a device (see Michihiros, cover sheet – problem to be solved).

Regarding claims 23 and 24, Hoffberg et al. and Michihiro teach the apparatus according to claim 22, as described above.

Hoffberg et al. and Michihiro further teach:

accumulates the operation history data (see Michihiro - page 4, lines 20-22, "an operation history database operable to accumulate the operation history recorded by said operation monitoring module", page 5, lines 11-12, "detects one or more sequences of operations which appear with frequency exceeding a standard frequency"),

specifies the frequent operation pattern based on the accumulated operation history data (see Michihiro - page 4, lines 22-25, "an operation pattern analysis module operable to analyze a series of operations (hereinafter referred to as an operation pattern) which frequently appear based on said operation history database) and

predicts the user's behavior from the specified frequent operation pattern (see Michihiro - page 4, lines 22-25, "an operation pattern analysis module operable to analyze a series of operations (hereinafter referred to as an operation pattern) which frequently appear based on said operation history database); and

provides service according to the user's behavior predicted by said user

server apparatus (see Michihiro - page 4, lines 9-11, "extracts a fixed processing

from details of the performed operation, and enable the user to easily use the

fixed operation", lines 27-28, "an operation pattern utilization module operable to

provide an interface by which the user can easily use the operation pattern").

Although Hoffberg et al. and Michihiro does not explicitly disclose a user server

apparatus and an application server apparatus to perform functions described above. It

would have been obvious to one of ordinary skill in the art to use two different servers or

any number of servers to perform the functions as described above. Using distributed

server to perform multiple step functions is efficient as tasks are distributed.

Regarding claim 25, Hoffberg et al. and Michihiro teach the apparatus according to

claim 22, as described above.

Hoffberg et al. teach a device and that the user operation history of the device

are received by the central controlling/processing system and stored in the user history

database (Hoffberg et al. – column 69, lines 53-67, "adaptive programmable

apparatus...comprising an data input for receiving data; a memory for storing data

relating to data input or the input signal" column 78, lines 44-67, "receiving data

describing a user attribute; receiving a content data stream, ..., the user attribute may

comprise... a past history of use by the user"; column 113, lines 55-62, "each program

entry of the user is submitted to the user history database and preference module").

Hoffberg et al. did not explicitly disclose the explicit operation information and that the user operation history is stored in the device.

Michihiro teach a device (Michihiro page 1, lines 14, calculator system) that includes: an operation history storage unit operable to store operation history data in which date and time of an operation and details of an operation are paired (Michihiro - page 4, lines 20-21 and page 5, lines 4-5, "accumulate, into an operation history database, the operation details and the operation state in which the operation is performed"; page 6, lines 5-7, "the operation monitoring module detects the start of the operation, and obtains the operation state of the time when the operation is performed");

Although Hoffberg et al. doesn't explicitly disclose that the device stores the operation history data and then transmit the operation history data to the device, it teaches that the controller receives operation history data which suggests that the data could be stored at the device's memory before it is sent to the controller. It would have been obvious to one of ordinary skill in the art, having the teachings of Hoffberg et al. and Michihiro before them at the time the invention was made to include a storage unit in the device to stored the operation history data as teach by Michihiro, but rather then to process the data locally, the data are sent to the controller as suggested by Hoffberg et al. to be processed remotely.

One of ordinary skill in the art would have been motivated to make this modification in order to keep the controller less busy from frequently handling reception of data, keep the device less busy from frequently handling transmission of data and less use of the communication medium (see Hoffberg et al. columns 102-103).

Regarding claim 26, Hoffberg et al. and Michihiro teach the apparatus according to

claim 25, as described above.

Hoffberg et al. further teach a viewing history storage unit operable to store

viewing history data related to content viewed by the user, and said operation history

transmission unit is operable to transmit, to said service provision apparatus, the

viewing history data stored in said viewing history storage unit together with the

operation history data (column 76, lines 13-14, "a memory for storing data relating to an

activity of the user"; lines 41-51, "a user input processing system for adaptively

determining a viewer preference based on the user input received by the controller; a

program material processing system for characterizing the program material based on

its content")

Regarding claim 27, Hoffberg et al. and Michihiro teach the apparatus according to

claim 25, as described above.

Hoffberg et al. further teach

wherein said device further includes a user identification unit operable to identify

the user who performed the operation (figure 17, element 1701, input user identification;

column 84, lines 46-64, "if multiple users use the device, then the device identifies the

relevant users"), and

said operation history storage unit is operable to store the result identified by said

user identification unit as a part of the operation history (column 89, lines 6-11, "the

controller thereafter uses a stored profile of the identified user in controlling the

interaction with the user").

Regarding claim 28, Hoffberg et al. and Michihiro teach the apparatus according to

claim 25, as described above.

Hoffberg et al. further teach

wherein said device is operable to store information as a part of the operation

history into said operation history storage unit, the information describing who a

communication partner is (column 89, lines 6-11, "the controller thereafter uses a stored

profile of the identified user in controlling the interaction with the user").

Regarding claim 29, Hoffberg et al. and Michihiro teach the apparatus according to

claim 22, as described above.

Hoffberg et al. and Michihiro further teach: said service provision apparatus includes:

an operation history reception unit operable to receive the operation history data

transmitted from said device (Hoffberg et al. – column 69, lines 53-67, "adaptive

programmable apparatus...comprising an data input for receiving data" column 78, lines

44-67, "receiving data describing a user attribute; receiving a content data stream, ...

the user attribute may comprise, ... a past history of use by the user");

an operation history database unit operable to accumulate the received operation

history data (column 69, lines 53-67, "a memory for storing data relating to data input or

the input signal");

a pattern extraction unit operable to extract a frequent operation pattern from the

operation history data accumulated in said operation history database unit (Hoffberg et

al. - column 126, lines 25-30, "the prior history of the user provides an excellent source

of information regarding the preference of the user, although this is sometimes not the

most efficient means, and may often include contradictory data. This historical use data

is therefore analyzed in a broad context in order to extract trends, which over a number

of uses may be further extracted as "rules""; Michihiro – page 5, lines 28-29, "the

operation pattern analysis module extracts one or more operation patterns");

a pattern database unit operable to store the extracted frequent operation pattern

(Michihiro – page 5, lines 29-30, "accumulates the one or more operation patterns into

the operation pattern database");

a pattern monitor unit operable to monitor whether or not a sequence of

operation history data corresponds with the frequent operation pattern stored in said

pattern database unit, the operation history data being newly received by said operation

history reception unit (Hoffberg et al. - column 126, lines 31-33, "the user history data...

will interact with preexisting rules of the expert system"); and

a service provision unit operable to provide service according to the user's

behavior predicted from a result of monitoring performed by said pattern monitor unit

apparatus (see Michihiro - page 4, lines 9-11, "extracts a fixed processing from details

of the performed operation, and enable the user to easily use the fixed operation", lines

27-28, "an operation pattern utilization module operable to provide an interface by which

the user can easily use the operation pattern"; see Hoffberg et al. - column 41, lines 3-

67, "may all be controlled locally or remotely through interfaces of the local system").

One of ordinary skill in the art would have been motivated to make this

modification for the same reasons as applied to claim 22.

Regarding claim 30, Hoffberg et al. and Michihiro teach the apparatus according to

claim 29, as described above.

Hoffberg et al. further teach:

wherein said service provision apparatus further includes a function and action

database unit in which at least one of the following relations is predetermined: a relation

between an operation performed by said device and a function provided to the user in

response to the operation; and a relation between an operation performed by said

device and an action considered as the action that the user desires to perform by the

operation (column 53, lines 66-67 and column 54, lines 1-10, "as applied to a

multimedia database storage and retrieval system, the user program, through an

adaptive user interface according to the present invention, the processing of data, by

defining a criteria and the actions to be taken based on the determination of the criteria

... a database of image .... Search the database for data which corresponds to the

request"), and

said pattern extraction unit is operable to compare the operation history data

accumulated in said operation history database unit with said function and action

database unit, to convert the operation history data into a sequence of function or

action, to extract a frequent pattern from the sequence of function or action, and to store

the extracted frequent pattern into said pattern database unit (column 127, lines 15-41,

"the house is controlled by execution of control sequences. The smart house system

also controls the climate control system, thus it could coordinate temperatures, air flow

and other factors, based on learned complex behaviors").

Regarding claim 31, Hoffberg et al. and Michihiro teach the apparatus according to

claim 29, as described above.

Hoffberg et al. further teach:

wherein said service provision apparatus includes:

   a viewing history reception unit operable to receive the viewing history data

transmitted together with the operation history data from said device (Hoffberg et al. –

column 69, lines 53-67, "adaptive programmable apparatus...comprising an data input

for receiving data" column 78, lines 44-67, "receiving data describing a user attribute;

receiving a content data stream, ..., the user attribute may comprise... a past history of

use by the user"; lines 41-51, "a user input processing system for adaptively

determining a viewer preference based on the user input received by the controller; a

program material processing system for characterizing the program material based on

its content"); and

   a viewing history database unit operable to accumulate the received viewing

history data (column 76, lines 13-14, "a memory for storing data relating to an activity of

the user"; lines 41-51, "a user input processing system for adaptively determining a

viewer preference based on the user input received by the controller; a program

material processing system for characterizing the program material based on its

content"), and

said pattern extraction unit is operable to extract a frequent pattern from both of

the operation history data accumulated in said operation history database unit and the

viewing history data accumulated in said viewing history database unit (Hoffberg et al. -

column 126, lines 25-30, "the prior history of the user provides an excellent source of

information regarding the preference of the user, although this is sometimes not the

most efficient means, and may often include contradictory data. This historical use data

is therefore analyzed in a broad context in order to extract trends, which over a number

of uses may be further extracted as "rules""; Michihiro – page 5, lines 28-29, "the

operation pattern analysis module extracts one or more operation patterns").

Regarding claim 32, Hoffberg et al. and Michihiro teach the apparatus according to

claim 29, as described above.

Hoffberg et al. and Michihiro further teach:

wherein said pattern extraction unit is operable to utilize information regarding

the operation user so as to extract the frequent operation pattern, the information being

transmitted from said device (Hoffberg et al. - column 126, lines 25-30, "the prior history

of the user provides an excellent source of information regarding the preference of the

user, although this is sometimes not the most efficient means, and may often include

contradictory data. This historical use data is therefore analyzed in a broad context in

order to extract trends, which over a number of uses may be further extracted as

"rules""; Michihiro – page 5, lines 28-29, "the operation pattern analysis module extracts

one or more operation patterns").

Regarding claim 33, Hoffberg et al. and Michihiro teach the apparatus according to

claim 29, as described above.

Hoffberg et al. and Michihiro further teach:

wherein said pattern extraction unit is operable to utilize information regarding

the communication partner so as to extract the frequent operation pattern, the

information being transmitted from said device (Hoffberg et al. - column 126, lines 25-

30, "the prior history of the user provides an excellent source of information regarding

the preference of the user, although this is sometimes not the most efficient means, and

may often include contradictory data. This historical use data is therefore analyzed in a

broad context in order to extract trends, which over a number of uses may be further

extracted as "rules""; Michihiro – page 5, lines 28-29, "the operation pattern analysis

module extracts one or more operation patterns").

Regarding claim 34, Hoffberg et al. and Michihiro teach the apparatus according to

claim 22, as described above.

Hoffberg et al. further teach a plurality of devices that transmit respective

operation data that describes the user's operation details (see Hoffberg et al. – column

42, lines 3-9, "inputs from various devices ... maybe received and processed locally or

remotely.... allowing enhanced remote monitoring and control possibilities.")

Hoffberg et al. does not explicitly disclose the detail utilization of the accumulated

operation history.

Michihiro teaches a system/apparatus that

accumulates the operation data transmitted from the plurality of devices as

operation history data in chronological order (see Michihiro - page 4, lines 20-22,

"an operation history database operable to accumulate the operation history

recorded by said operation monitoring module", page 5, lines 11-12, "detects one

or more sequences of operations which appear with frequency exceeding a

standard frequency"),

specifies the frequent operation pattern based on the accumulated

operation history data (page 4, lines 22-25, "an operation pattern analysis

module operable to analyze a series of operations (hereinafter referred to as an

operation pattern) which frequently appear based on said operation history

database) and

provides service according to the user's behavior predicted from the

specified frequent operation pattern (page 4, lines 9-11, "extracts a fixed

processing from details of the performed operation, and enable the user to easily

use the fixed operation", lines 27-28, "an operation pattern utilization module

operable to provide an interface by which the user can easily use the operation

pattern").

It would have been obvious to one of ordinary skill in the art, having the teachings of Hoffberg et al. and Michihiro before them at the time the invention was made to modify the system that provide service to a device based on accumulated user operation history of Hoffberg et al. to use the method of analyzing the operation frequency and pattern of the accumulated operation history as taught by Michihiro.

One of ordinary skill in the art would have been motivated to make this modification in order to enable a controller to provide services to a user based on monitoring user operation onto a device in view of Michihiro.

Regarding claim 35, Hoffberg et al. and Michihiro teach the apparatus according to claim 22, as described above.

Hoffberg et al. further teach:

wherein said serviced provision apparatus provides the service by automatically controlling said device according to the frequent operation pattern (see Hoffberg et al. – column 42, lines 3-9, "inputs from various devices ... maybe received and processed locally or remotely.... allowing enhanced remote monitoring and control possibilities.").

Regarding claim 36, Hoffberg et al. teach:

An operation history utilization method for utilizing a user's operation history and providing the user with service, the method comprising steps of:

transmitting operation data that describes the user's operation details, said transmitting being performed by a device (see Hoffberg et al. – column 42, lines 3-9,

"inputs from various devices ... maybe received and processed locally or remotely....

allowing enhanced remote monitoring and control possibilities");

providing service according to the user's behavior predicted from a frequent

operation pattern included in the accumulated operation history data (column 41, lines

3-67, "may all be controlled locally or remotely through interfaces of the local system"

and column 42, line 9-10, "remote monitoring and control"; abstract: "predicting a

desired user function based on user history", "The apparatus receives an input from the

user and other data", "wherein a user input is matched to a video stream on a

conceptual basis, allowing inexact programming of a multimedia device", "the system

analyzes a data stream for correspondence with a data pattern for processing and

storage");

Hoffberg et al. does not explicitly disclose the detail utilization of the accumulated

operation history.

Michihiro teaches a system/apparatus/device that

accumulating the operation data transmitted from the device as operation history

data in chronological order (see Michihiro - page 4, lines 20-22, "an operation history

database operable to accumulate the operation history recorded by said operation

monitoring module", page 5, lines 11-12, "detects one or more sequences of operations

which appear with frequency exceeding a standard frequency");

specifying a frequent operation pattern which is a sequence of frequent operation

histories based on the operation history data (see Michihiro - page 4, lines 22-25, "an

operation pattern analysis module operable to analyze a series of operations

(hereinafter referred to as an operation pattern) which frequently appear based on said

operation history database); and

provuding service according to the user's behavior predicted from a frequent

operation pattern included in the accumulated operation history data (see Michihiro -

page 4, lines 9-11, "extracts a fixed processing from details of the performed operation,

and enable the user to easily use the fixed operation", lines 27-28, "an operation pattern

utilization module operable to provide an interface by which the user can easily use the

operation pattern").

It would have been obvious to one of ordinary skill in the art, having the

teachings of Hoffberg et al. and Michihiro before them at the time the invention was

made to modify the system that provide service to a device based on accumulated user

operation history of Hoffberg et al. to use the method of analyzing the operation

frequency and pattern of the accumulated operation history as taught by Michihiro.

One of ordinary skill in the art would have been motivated to make this

modification in order to enable a controller to provide services to a user based on

monitoring user operation onto a device in view of Michihiro.

Regarding claim 37, Hoffberg et al. and Michihiro teach the method according to claim

36, as described above.

Hoffberg et al. teach a device and that the user operation history of the device

are received by the central controlling/processing system and stored in the user history

database (Hoffberg et al. – column 69, lines 53-67, "adaptive programmable

apparatus...comprising an data input for receiving data; a memory for storing data
relating to data input or the input signal" column 78, lines 44-67, "receiving data
describing a user attribute; receiving a content data stream, ..., the user attribute may
comprise... a past history of use by the user"; column 113, lines 55-62, "each program
entry of the user is submitted to the user history database and preference module").

Hoffberg et al. did not explicitly disclose the explicit operation information and
that the user operation history is stored in the device.

Michihiro teach storing operation history in which date and time of an operation
and details of an operation are paired (Michihiro - page 4, lines 20-21 and page 5, lines
4-5, "accumulate , into an operation history database, the operation details and the
operation state in which the operation is performed"; page 6, lines 5-7, "the operation
monitoring module detects the start of the operation, and obtains the operation state of
the time when the operation is performed");

It would have been obvious to one of ordinary skill in the art, having the
teachings of Hoffberg et al. and Michihiro before them at the time the invention was
made to modify the processing/controlling system that provide service to a device based
on accumulated user operation history of Hoffberg et al. to receive stored operation
history details from a device as taught by Michihiro.

One of ordinary skill in the art would have been motivated to make this
modification to use details including date and time of the operation to predict users
preference at a particular time, since Hoffberg et al. teach that user history is received,

and it would be obvious to receive the operation history from the device that the user is operating in view of Michihiro.

Regarding claim 38, Hoffberg et al. and Michihiro teach the method according to claim 36, as described above.

Hoffberg et al. and Michihiro further teach:

receiving the operation history data transmitted from said device (Hoffberg et al. – column 69, lines 53-67, "adaptive programmable apparatus...comprising an data input for receiving data" column 78, lines 44-67, "receiving data describing a user attribute; receiving a content data stream, ..., the user attribute may comprise... a past history of use by the user");

accumulating the received operation history data into an operation history database unit (column 69, lines 53-67, "a memory for storing data relating to data input or the input signal");

extracting the frequent operation pattern from the operation history data accumulated in said operation history database unit (Hoffberg et al. - column 126, lines 25-30, "the prior history of the user provides an excellent source of information regarding the preference of the user, although this is sometimes not the most efficient means, and may often include contradictory data. This historical use data is therefore analyzed in a broad context in order to extract trends, which over a number of uses may be further extracted as "rules""; Michihiro – page 5, lines 28-29, "the operation pattern analysis module extracts one or more operation patterns");

storing the extracted frequent operation pattern into a pattern database unit

(Michihiro – page 5, lines 29-30, "accumulates the one or more operation patterns into

the operation pattern database");

monitoring whether or not a sequence of newly received operation history data

corresponds with the frequent operation pattern stored in said pattern database unit

(Hoffberg et al - column 126, lines 31-33, " the user history data... will interact with

preexisting rules of the expert system"); and

providing service according to the user's behavior predicted from a result of

monitoring (see Michihiro - page 4, lines 9-11, "extracts a fixed processing from details

of the performed operation, and enable the user to easily use the fixed operation", lines

27-28, "an operation pattern utilization module operable to provide an interface by which

the user can easily use the operation pattern").

It would have been obvious to one of ordinary skill in the art, having the

teachings of Hoffberg et al. and Michihiro before them at the time the invention was

made to modify the system that provide service to a device based on accumulated user

operation history of Hoffberg et al. to use the method of analyzing the operation

frequency and pattern of the accumulated operation history as taught by Michihiro.

One of ordinary skill in the art would have been motivated to make this

modification in order to enable a controller to provide services to a user based on

monitoring user operation onto a device in view of Michihiro.

Regarding claim 39,

Hoffberg et al. teach: A device in an operation history utilization system which

provides a user with service by utilizing the user's operation history on the device, the

device comprising: an operation data transmission unit operable to transmit operation

data describing the user's operation details (Hoffberg et al. – column 69, lines 53-67,

"adaptive programmable apparatus...comprising an data input for receiving data"

column 78, lines 44-67, "receiving data describing a user attribute; receiving a content

data stream, ..., the user attribute may comprise... a past history of use by the user";

column 42, lines 3-9, "inputs from various devices ... maybe received and processed

locally or remotely....allowing enhanced remote monitoring and control possibilities.");

Hoffberg et al. does not explicitly disclose the detail utilization of the accumulated

operation history.

Michihiro teaches a control unit operable to accumulate the operation data

transmitted from the device as operation history data in chronological order (Michihiro -

page 4, lines 20-22, "an operation history database operable to accumulate the

operation history recorded by said operation monitoring module", page 5, lines 11-12,

"detects one or more sequences of operations which appear with frequency exceeding

a standard frequency"), to specify a frequent operation pattern which is a sequence of

frequent operation histories based on the accumulated operation history data (Michihiro

- page 4, lines 9-11, "extracts a fixed processing from details of the performed

operation, and enable the user to easily use the fixed operation", lines 27-28, "an

operation pattern utilization module operable to provide an interface by which the user

can easily use the operation pattern"), and to control the device following an instruction

from a service provision apparatus which provides service according to the user's

behavior predicted from the specified frequent operation pattern (see Michihiro - page 4,

lines 9-11, "extracts a fixed processing from details of the performed operation, and

enable the user to easily use the fixed operation", lines 27-28, "an operation pattern

utilization module operable to provide an interface by which the user can easily use the

operation pattern").

It would have been obvious to one of ordinary skill in the art, having the

teachings of Hoffberg et al. and Michihiro before them at the time the invention was

made to modify the system that provide service to a device based on accumulated user

operation history of Hoffberg et al. to use the method of analyzing the operation

frequency and pattern of the accumulated operation history as taught by Michihiro.

One of ordinary skill in the art would have been motivated to make this

modification in order to enable a controller to provide services to a user based on

monitoring user operation onto a device in view of Michihiro.

Regarding claim 40,

Hoffberg et al. teach: A service provision apparatus that provides a user with service by

utilizing the user operation history on the device, the apparatus comprising:

a reception unit operable to receive operation data describing the user's

operation details transmitted from the device (Hoffberg et al. – column 69, lines 53-67,

"adaptive programmable apparatus...comprising an data input for receiving data"

column 78, lines 44-67, "receiving data describing a user attribute; receiving a content

data stream, ..., the user attribute may comprise... a past history of use by the user";

column 42, lines 3-9, "inputs from various devices ... maybe received and processed

locally or remotely....allowing enhanced remote monitoring and control possibilities");

and

a service provision unit operable to accumulate the received operation data as

operation history data in chronological order (Michihiro - page 4, lines 20-22, "an

operation history database operable to accumulate the operation history recorded by

said operation monitoring module", page 5, lines 11-12, "detects one or more

sequences of operations which appear with frequency exceeding a standard

frequency"), to specify a frequent operation pattern which is a sequence of frequent

operation patterns based on the accumulated operation history data (Michihiro - page 4,

lines 9-11, "extracts a fixed processing from details of the performed operation, and

enable the user to easily use the fixed operation", lines 27-28, "an operation pattern

utilization module operable to provide an interface by which the user can easily use the

operation pattern"), and to provide service according to the user's behavior predicted

from the specified frequent operation pattern (see Michihiro - page 4, lines 9-11,

"extracts a fixed processing from details of the performed operation, and enable the

user to easily use the fixed operation", lines 27-28, "an operation pattern utilization

module operable to provide an interface by which the user can easily use the operation

pattern").

It would have been obvious to one of ordinary skill in the art, having the

teachings of Hoffberg et al. and Michihiro before them at the time the invention was

made to modify the system that provide service to a device based on accumulated user

operation history of Hoffberg et al. to use the method of analyzing the operation

frequency and pattern of the accumulated operation history as taught by Michihiro.

One of ordinary skill in the art would have been motivated to make this

modification in order to enable a controller to provide services to a user based on

monitoring user operation onto a device in view of Michihiro.

Claim 41 is rejected for the same reasons as that of claim 39.

Claim 42 is rejected for the same reasons as that of claim 40.

Conclusion

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Yan Chen whose telephone number is (571) 270-1926.

The examiner can normally be reached on Monday through Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jeff Pwu can be reached on (571) 272-6798. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

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Yan Chen

JEFFREY PWU
SUPERVISORY PATENT EXAMINER